1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

There are names for every section of land, reef, and beach on the atoll, indicating the close association of the Pukapukan with his environment. The most important place names are marked on the accompanying maps (fig.1,*a*,*b*).

Climate

Records for the years 1930-35 (21) show that the mean temperature ranges between 80.9 and 83.9 degrees F., maximum temperature between 86.8 and 92, minimum temperature between 67 and 75 degrees. The average maximum absolute temperature throughout the year is 92.2 degrees and the average minimum absolute temperature is 67.4 degrees. Both minimum and maximum temperatures vary but slightly from month to month throughout the year, and the climate in this respect is equable.

For the period of record, the annual rainfall varies between 113 and 156 inches with an average of 128.41 inches. The season of heaviest rainfall is October to March, but heavy rains are recorded for April and May (1932, 1934), May and June (1931). In January 1935, after three days of continuous rain, 10 inches of rain fell in the next 24 hours. The amount and distribution of rainfall are important in the cultivation of swamp talo. A heavy rain floods the talo beds. After a heavy rain, the most desired weather is shady, cloudy skies, for if the rain is followed by brilliant sunshine for several days the submerged talo swamps may be heated to such a temperature before the water drains into the ground that the talo is killed. During the dry months, May to September, the rainfall is generally insufficient to bring talo to maturity. In bad years, the talo swamps may dry up altogether and most of the tubers die. It then requires from 6 to 12 months before the new tubers are mature enough for food. Conditions brought about by scanty rainfall must often in Pukapukan history have approached a state of virtual famine. The diet on such occasions as these would be fish and nuts exclusively. With each adult on the island consuming from 7 to 10 nuts daily, and children proportionately fewer, the available supply of eating nuts must soon get very low.

Records for the year 1932 indicate prevailing winds from west through northeast blowing for 115 days in the year, from east through southwest for 226 days in the year. From May to October the prevailing winds (the trades) come from the east and southeast, and from November to April from the north and northwest. The northerly winds are much more variable than the trade winds, and the period from November to April is a time of storms, heavy winds, gales, and electrical disturbances. Pukapuka is just outside the regular hurricane belt, but there are records of severe visitations. A "tidal wave", probably accompanying a hurricane, which devastated the island about 300 years ago is mentioned in traditional history (p. 386). The

1.[See p. 18, category 116 ~ analyst]

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

thought that the men's guard was consuming privately from the reserve more food than it was preserving, the old men of Loto arranged that the men should serve for six months only, and that adult women should serve as guards for six months of the year. The rationalization was that the women would not be so expert at climbing nut trees as the men, and that they could devote spare time to talo cultivation. Hence in Loto today, the men's guard serves from January through June, each man acting for three months each year; the women's guard, two groups of 30 women each, serves from July through December, each woman also acting for three months each year. The Yato guard consists of men only, about 25 men for each guard. With 50 men in Yato village, each man serves for six months each year, usually in alternate months.

Six watch houses (*uale palonga*) are scattered through the reserve of Uta. The guard is divided into six groups (*taka*); a group of four men or women watches from each house for one month, then moves in rotation to the next house, shifting houses thus each month. The single watch house in Niua at the head of the fish pond, the site of the former lagoon gate to the reserve, is used by the Yato guard as its headquarters.

There is a tendency in Loto to group the members of each guard according to age grades. Thus one guard will comprise the oldest men, the following one middle-aged men, and so on.

Much friendly rivalry exists between successive companies of guards. In Yato, at the end of every month, the guard fishes in the pond for the benefit of the entire village and much is made of the fact if one company catches more mullet than the preceding company.

The monthly guard change (*te singa pule*) is accompanied by a division of food from the reserves among the people of the village.

In Loto a division of drinking and mature nuts is made. In Yato nuts and, in season, papaya and limes procured from Motu Kotawa by guards who make a special trip to obtain the fruit are divided. The guards under the supervision of older men gather the nuts from Niua and Uta. The change of guard in Niua on January 9, 1935, was marked by the following typical food division: each man, woman, and child on the village rolls received two drinking nuts; the 48 women of Yato received papaya at the rate of one for every three women; 79 children received papaya at the rate of one for every four children. At other times, the division included men and not women, or men and women and not children. The conclusion of the month's guarding is accompanied also by a small division among the guard of fish caught by delegated members of the group and of talo foods prepared by their wives and relatives.

The duties of the guard are to patrol the reserve throughout the day and keep away thieves; to preserve the nuts, pandanus trees, and other flora of the reserve from depredations; to keep wandering pigs and chickens from destroying the talo beds. They put tapus (*lauí*) on young nut trees by tying coconut midribs round the boles of the trees. Formerly the breaking of such a tapu was punished by the gods of the reserve; today a thief

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tight and the free end tied to the outrigger. As long as the turtle is attached to the outrigger, it will not sound. The fisherman waits for a canoe from shore. The turtle is lifted into the canoe and taken ashore.

In both these methods great care is taken to prevent the penis tail of the male turtle from locking the fisherman's leg against the carapace. Once this is done, the grip is viselike; the turtle sounds, drowning the fisherman. The tail is also a formidable weapon. If it pierces the body of the fisherman, priapism and death are extremely likely. The male turtle is much more difficult to catch than the female.

3. *Wali uwou*, turning over the female turtle on the beach. The turtle-laying season begins with the morning rising of the Pleiades and continues until their evening rising. Only the two green turtles lay eggs on Pukapukan beaches. The fisherman goes to the outer beaches and watches for turtle tracks or turtle nests in the sand. When he finds a nest, he counts the eggs. It is believed that the female turtle returns to her nest after a given number of days depending on the number of eggs in the nest. Thus if there are 120 eggs or more in the nest, she is expected to return in 8 nights to lay again; if there are 100 eggs, she will return in 10 nights; if there are 80 eggs, in 11 or 12 nights; if 60 eggs, in 14 nights. The outer beach is then watched on the appropriate night at the full of the tide. When the female turtle comes ashore, she is turned over on her back and rendered helpless.

Formerly all turtles were taken to the meeting place of the old men and there the meat, fat, eggs, and shell were divided among the people of the island. The man who caught the turtle was given its head besides his share of the flesh. For the old men were reserved the belly fats (*pukualonga*) and the major internal organs (*ngakau niafua*). It was tapu for any others but old men to eat these parts on pain of sickness and grey hair. The custom of dividing a turtle among all members of the community survives today.

OCTOPUS AND CRAYFISH

The Pukapukan levies on other creatures of the sea or reef besides fish to provide him with food. The long-tentacled octopus (*weke makave loa*) and the short-tentacled octopus (*weke makave poto*) are caught for bait, but they are not eaten.

Formerly they were speared or fished with line and hook. Today a common way to catch them is to throw several handfuls of coral lime (*punga*) into an octopus hole. The lime dissolves and causes the animal to emerge, when it is speared or grasped with the hands. Squid (*muske*) is eaten and used as bait. It is speared or caught with a hook.

Saltwater crayfish (*ula*) live in communities in large holes in the reef. Knowledge of these holes is kept secret by those fortunate enough to know them. One who knows where they are can pick out a crayfish from his hole at any time; others fish for *ula* in any likely hole on the reef shelf.

The best time for finding crayfish is on the first three nights of the new moon after moonset. Using a torch, a man visits holes of the reefs and picks out the *ula* with his hands (*lalao ula* or *tango ula*). Crayfish are caught also during the nights of the full moon at high tide. They are sometimes caught in torch fishing (*lamalama*) or in seine netting at dusk. A final method is to fish for them in holes, with a rod, a single-piece barbed hook, *haloma* bait, and plenty of chum.

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SHELLFISH

227 *Tridacna* shellfish (*payua*) is obtained from the lagoon corals with the aid of a cutting implement (*kalo payua* or *manin payua*) of *ngangie* wood about 12 inches long. One end is a double-edged, pointed, sharpened blade (*kalo*). The other end (*kalokalo*) is square and has a cutting edge on one side only. Between the two blades is a smooth section of wood used as a handle. Today a piece of iron with wood lashed along the median line is [483] preferred to the wooden implement. Both men and women procure *payua*. Groups of girls or mixed parties of young men and girls go shellfishing to- 226 gether. An outrigger is often taken out from shore to act as a float.

By one method the fisherman dives for *payua* in deep water. He cuts the membranes on the two open half-shells with a twist of the *kalo* blade of the knife to prevent the shell from closing. Then with the *kalokalo* blade he makes a circular sweep around both shells and severs the flesh from the shell. He brings the flesh to the surface, leaving the shell below the water. The flesh is placed in a basket tied to the outrigger float. Considerable skill is required to remove *Tridacna* meat with the implement in the time the fisherman can remain submerged.

Another way to procure *payua* is to swim or canoe out to the coral heads of the lagoon and pry (*nofenofa*) the shells from the coral with a digging stick. Today an iron crowbar is preferred for this work. The shells are loaded into the canoe and brought ashore, where the flesh is cut out with a *kalokalo* or knife. On coral heads in the lagoon close to Motu Ko are huge piles of *Tridacna* shells (*ngalipayua*) which testify to the value placed on *payua* meat in past times.

226 The flesh of the pearl shell (*uwa ui*) is not eaten. The shells are grasped 321 in the hand and twisted so as to break off the tentacles anchoring the shell to the coral. Pearls were of no value when found inside the shell and were commonly thrown away.

The general name for clams is *pipi*. Various varieties are *pipi yeyenga*, *pipi kula*, *pipi tonga*, and *ngu*. They are not eaten but the shells were [413] formerly valued for cutting implements, coconut graters (for which the clam *ngu* was used), talo scrapers, and occasionally for lancets in surgery.

Periwinkles (*alili*) come over the reef in large quantities at the full of 226 the moon and are especially numerous during the time of the morning rising 262 of the Pleiades. They are collected on the reef by hand by children and adults and form an occasional article of diet, roasted in the shells. The flesh is pulled from the shell with the fingers or a pointed stick. Periwinkles are considered hard to eat and not very satisfying but pleasant enough for a change.

REEF CREATURES

136 Reef creatures found on Pukapuka but not eaten, though sometimes caught on other Polynesian islands for food, are sea porcupines, of which the Pukapukan names four: *wetuke* (a blunt-spined sea porcupine); *tuna* (a

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

sharp, long-spined porcupine); *tala pu mutumutu* (a short-spined porcupine); and *uluulu akau* (a small, bluish-spined porcupine). If a fisherman steps on the *kalomea*, a sharp-spined starfish, when walking on the reef, his foot is stuck full of spines. He turns over the *kalomea*, places his foot on the suction pads of the creature, and allows it to suck out the spines from his foot. Five varieties of bêche-de-mer are: *matua kalou, louili kulo, louili uli, louili akau,* and *louili taupulepule,* which live under the sand. *Unukoa* is a mollusk that lives in a tapering tunnel in the coral. If stepped on, its poisonous shell produces terrible sores in the foot. The shellfish *valuyi* (*Nerita polita*) found on beach or reef, is used as a head for the water bottle scraper, also called *valuyi*. If a man found a jellyfish (*kalukalu moana* and *ngako*) on the reef, he took it home, carefully sun-dried it, and hung it up to the rafters inside the house, for it was believed to have been sent by the god of the paternal lineage and was taken as a sign of the god's good favor. Two varieties of sea centipede are *molokau tai* and *valou*. Only the *valou* are caught and eaten. To obtain them a noose is made in a piece of two-ply twisted sennit and held over the entrance of the sea centipede's hole. Chum of any kind is placed in and around the hole. When the *valou* comes from the hole to get the chum, the noose is drawn tight. Another method is to spear the *valou* through the head as it comes forth to get the chum.

CRABS

Three varieties of crab (generic name *tupua*) are caught on the outer beaches on certain nights of the moon and two stages are distinguished in the monthly growth of the three varieties:

Kaipua are caught on the thirteenth and fourteenth nights; *tupa*, on the fifteenth and sixteenth nights; and *kaveu* (robber crab) on the seventeenth and eighteenth nights. During these nights the crabs move from the bush to the sea to wash and change their shells. On other nights of the moon crabs for bait can be obtained inland with more difficulty. On the evening before a man plans a fishing expedition, his children go out with torches after dark, hunting around trees in the bush and in holes. The crabs are put into a basket and kept until ready for use. Enough crabs for one or two weeks' fishing may be collected at one time.

In the first stage of growth (*tama te tupua*) during the new and full moon the crab is filled with fat much esteemed as a food delicacy. In the second stage (*pupu te tupua*) the fat has turned into yellow masses of eggs that are bursting from the abdomen of the animal. Crabs are not eaten at this time because neither eggs nor fat are considered tasty. *Kaveu* is protected at the present time by a general agreement (*pulenga*) because it is thought to be dying out. Only large *kaveu* are killed; young ones caught accidentally are freed. Robber crabs in the reserves are kept as reserve food supplies and are caught only by arrangement by the people of the village. This communal catching and distribution of crabs among the people of the village (*lavaya kaveu*) enable all the people of the village to share in the food delicacy. If *kaveu* were not reserved (*wakaya*), children and active young people would hunt them all the time, and the older people might not receive their fair share.

Three methods are employed to catch *kaveu*:

The first method is *lomalama kaveu*. A lighted torch is thrust into the crab hole. The torch smoulders and the smoke forces the crab from its second hole, when it is promptly caught. In the second method (*yokayoka kaveu*) a pointed stick is thrust into the ground or into holes to locate the crab. The hand is then put down into the hole to draw out the crab. The third method is *wakapoa kaveu*. Coconut gratings are toasted over a fire until they become highly odorous and are then placed in the bush to attract the crabs. A few hours later a man visits the place and picks up the congregated crabs.

Crab hunting and killing is *wuli tupua*. The crab is picked up by the shell and, with a quick twist, the head is bent back from the mandibles and broken off. It is prepared for eating by roasting.

Bird Catching

Of old, birds were caught principally for food, though the feathers were used secondarily as decorations for the hair and for the malo made of sennit. Today feathers are used as flies in fishing.

Birds are part of the reserve land foods and are tapu for most of the time. A decision to lift the tapu is announced to the people by the guards. The young men communally gather the birds which are divided among the people of the village. Small land birds are occasionally caught privately.

All birds are considered a great delicacy, but the young *lakia* bird is preferred. The owner of a new canoe might formerly obtain permission from the village to visit the reserves to procure quantities of *lakia* for the feast which marked the conclusion of the work on the canoe. The birds were shared among the people of the village and the canoe afterward referred to as *vaka koi lakia*.

Birds were never kept as pets or decoys. When caught as a fledgling, a bird was placed alive in a cone-shaped coconut-leaf basket (fig.16)[1] and transported back from the reserve therein. The basket with the bird was suspended from a tree near the cook house. The bird was fed with coconut flesh; a new basket was made when the bird grew bigger. When the bird matured, it was killed and eaten. Today a bird is occasionally kept in a small four-sided wooden box hung on a tree near the house. Its wings are broken to prevent escape. It is fed by the children and killed when mature. One man in Yato keeps two semi-wild *noa* birds tied by the leg to a log near his house. When they escaped one day and walked through the village, everyone ran before them with shouts of "Kai tangata!" (Man-eater). It was some time before the birds were recaptured and the village settled down again to normal routine.

1. Netting. The method of catching birds by use of the bird net (*tuuata*) is termed *wakayei manu* (to encircle the bird with a net). (For technical details of the construction of the net, see p. 209).

1. [See p.140, category 116 -- analysis]

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Canoes are bailed dry and excess moisture is wiped out with wringers of coconut fiber. They are covered with old coconut-leaf mats (*pola*), unplaited dry coconut leaves, and pieces of pandanus matting. This canoe covering is termed *kaukau lama* or *tapola*. Coconut-leaf butts and lengths of timber are leaned against the covering to prevent its blowing away in the wind.

Formerly canoes were never anchored with a cable to prevent them from drifting. A stick, called *iki tawia*, was driven into the sand of the resting place of the canoe just forward of the stern cross boom on the port side of the canoe between the hull and the longitudinal spar. This served to anchor the canoe securely because the top end of the stick projected well above the cross boom.

Cultivation and Harvesting

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The vegetable foods of the Pukapukans are limited to coconuts, talo, *pulaka*, bananas, and pandanus. Today a few papayas and limes grow on Motu Kotawa. Coconuts and talo were and are the staple vegetable foods; the coconut is immeasurably the more important. All parts of the coconut tree were used for food as well as clothing and sennit; its value led the people to study every phase in growth of fruit and tree. Any Pukapukan can distinguish stages in the growth of the nut by a glance at a tree, however high; and he will climb only that tree which has on it the particular fruit for his purpose.

Coconut

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The origin of the coconut is told in the following Pukapukan version of a widespread Polynesian myth.

Mauienli and Mauiepopo were a Pukapukan man and wife. Mauiepopo conceived a child by her husband and, as is the habit of women at this time and in this condition, she longed for special and strange foods to eat. She had tasted everything that her husband could bring her, but still she longed for other foods. Her husband fished and fished and brought her home his catch, but she refused to eat it, saying, "This fish smells rotten to me. Take it away. I do not like it. Go fishing again and bring me some other fish." So he went fishing again, and this time brought home some sweet fish, fat and delicious. But again his wife refused to eat, saying, "This fish is too sickly sweet. I don't like it." This went on for many days, the husband procuring all kinds of new fish, the wife refusing them all, until he was worn out with his toil, while his wife pined away for food. At last he said to her, "Tell me what kind of fish it is that you long for, and then I will try to bring it to you." She replied, "There is one fish only that I desire and that is a piece of the *tuna* eel."

The man got his bait and hooks and went to the hole of the *tuna*. He baited his hook and threw it into the hole, but the *tuna* would not bite. He tried many kinds of bait fish in turn but with no luck. At last in despair he tried a bait of flowers and leaves, but still the *tuna* would not bite his hook. In the end, when he was about to give up altogether, he thought of his wife sitting at home waiting for him and decided to make one more try. For this last effort he baited his hook with the strong-perfumed

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Wuuti: the nut is a little larger than koua and has a dark green husk.
Uivaka: the immature nut has grown still larger but is still not used as food. Children use nuts at this stage as crude dolls.
Moto katia: the husk is well formed; the cavity is filled with a clear fluid which is bitter and undrinkable; no flesh has yet formed. If the husk is flicked with the fingers it gives off a hollow resonance.
Mukomuko: a thin, slimy, easily detachable flesh begins to form over the inner surface of the nut. The mukomuko flesh forms inside the mesocarp at the point of attachment of stalk to nut. When the green outer husk is stripped off, the edible husk is exposed—a white, musty substance around the outside of the eyes. Mukomuko from certain trees (niu malo, niu kawa kanakona, and niu uyi) is sweeter and more desirable than others. The fluid from the advanced mukomuko nut may be drunk but is more often added to talo puddings.
Niu katikati: the shell is harder, the flesh thicker though still slimy. The liquid ceases to be bitter and may be drunk.
Niu mata motomoto: the drinking nut in its earlier stage. The liquid is not so sweet as in the next stage. The flesh is soft and thick and is eaten after the liquid is drunk. The husk is dry and unfit for food.
Niu mata: drinking nut at its best stage. The liquid is sweet (leka) and the flesh tasty (malie). When this nut is shaken, the liquid inside can not be heard.
Niu mata matua: the nut a little past its best drinking stage. The flesh has become hard, especially about the base of the nut; but the liquid is plentiful and sweet.
Niu katea: the flesh is thick and hard; there is less fluid. The husk is darker than the niu mata, and the liquid rattles inside the shell when shaken. It is not particularly desired as food, but the liquid is drunk and the flesh eaten if the nut is husked. A nut at this stage is normally allowed to develop into a yakali nut. The flesh is specially used now as pig food.
Niu uli: the husk turns brown; the liquid becomes slightly bitter and the flesh hard. The embryo develops.
Niu papaku (modern name, yakali): The flesh (ipiipi) is mature, thick, and hard. Liquid is bitter and unfit to drink. The embryo has developed into an absorbing organ. This is the stage used in copra making. The ipiipi flesh is eaten with fish or other foods in the absence of talo; from it coconut cream (lolo) is made.

[258]

Uto: the yakali nut left on the ground to germinate becomes filled with the spongy absorbing organ (uto). The liquid is absorbed and the flesh (ipiipi) is very thin or entirely absorbed. Leaves, stem, and roots develop. The uto is an important everyday food.
Takataka: stored yakali nuts. The embryo is undeveloped; the flesh thick, hard, and sweet; there is no fluid. After 6 months' storage, when the nut is dry but the flesh still fairly soft, the nuts are said to be mamaya. After a year the flesh changes its color from white to yellow-brown and the nut is described as koa ata (coloring). After 3 years the flesh is brown or red and the nut is described as koa kula (red-brown). The flesh is eaten by itself or as a food complement (kinaki) to pandanus fruit or edible mukomuko. It is also used in the preparation of coconut oil.

257 Takataka nuts are stored on the high platform of a storage house (*nofo takataka*) in one of two ways:

In the first method the yakali nuts may be left unhusked (*nei kaua*) so that rats can not bite through the husk to the flesh within. The drying process hardens and strengthens the husk fibers which are later soaked in salt water and used to make sennit. By the second storage method the yakali nuts are husked and a piece of *punga* coral of appropriate size is driven into each eye of the nut, effectively closing the eyes so that rats cannot gnaw through the shell. Nuts are stored for five years or more

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244 423 two beds well demarcated. When the talo grows, however, the two varieties are often so intermixed that the boundary is unclear. A single talo bed may be planted with one variety or with several varieties planted in sections running crosswise over the bed.

244 262 Any and all of the varieties are used indifferently in preparing the talo dishes. All are considered equally fertile. The only reason for planting one variety rather than another is to get the benefit of the slight differences in taste and flavor between varieties.

244 192 Native terminology for talo and *pulaka* is:

Pulaka: the whole plant.
Talo: the whole plant.
Wawa: old name of the talo corm; wawa is used interchangeably today with talo for both plant and corm.
Kau a pulaka, kau a talo: the petiole.
Tingapula: the cutting, top section sliced off the mature corm with petioles and leaves.
Lau talo: talo leaf.
Launaa: pulaka leaf.
Lito: delicate young leaves protruding from the base of the innermost talo leaf.
Pikopiko: the lateral cormlet or sucker produced at the side of the corm and bearing a crown of leaves.
Aka: root.
Wuluwulu: rootlets of the corm.
Palapala: swampy mud in which the plants are grown.
Ui talo, ui pulaka: bed or garden.
Wua: talo bed of a single man, woman, or child in communally owned talo land.

There is no elaborate garden magic in the planting and cultivation of talo. New moon planting was favored to produce plenty of talo with large and good-flavored corms. Full moon planting was also good, but after a few replantings the corms tended to grow smaller. Formerly a bed was stripped (*wuutai*) and replanted at the new moon, but a few tubers were removed (*matasya*) from a field at any time.

The complete process of going to the garden, harvesting, planting, and bringing home talo is termed *tapa wuua*.

244 782 412 When a woman or girl goes to the talo bed, she takes with her a coconut-leaf basket (*hete lauuia*); formerly also, a turtle-bone cutting implement (*aaka*). She recognizes the mature (*kiia*) corm by the yellowing and curling up of the leaves. She pulls out (*longa*) the talo plant and slices off (*tapa*) the top section, tossing the corm to the embankment of the bed. She loosens the soil from which the plant was pulled, digging it up (*tahi*) with a stick (*hapa ui*). She slices most of the leaves from the petiole, usually leaving one leaf, and sets the cutting back in the ground. She tramps the soil around the slip to make it firm, planting in rows, not in hills. She throws the leaves stripped from the petioles back on the ground and tramps them into the soil. She repeats the process until she has sufficient tubers. When a whole bed is being stripped by two workers, one pulls the corm and throws it to the side; the other cuts the top section from the corm and throws it back to the harvester, who replants it. In former days after harvesting sufficient talo, the worker set aside from 4 to 10 corms for the gods of the garden, saying, "Matalomua e, Matalomua e, here is your share of talo to help increase the yield of my garden." Then the cuttings from these corms were

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Payments

439 431 476 574 554 [322]

Mention has been made of services which are paid for. A man who borrows a canoe gives fish in payment. A man who engages a medicine man may make a return of food for his services. Distribution of food and gifts accompany the building of a house or canoe:

When a man decides to have a canoe built and has assured himself of the necessary timber, he makes arrangements with his relatives to have a stocktaking of available food supplies. They then increase supplies deemed insufficient, by planting more talo, placing a prohibition over growing talo, and by acquiring more pigs which are fattened by a diet of coconuts. When the food is sufficient and has all been mobilized, the work is started. Groups of relatives assume responsibility for providing food day by day for the carpenters, bunches of nuts in the early morning and staple foods in the afternoon. The prospective owner of the new canoe is obliged to provide liberal quantities of food in order to avoid the reputation of stinginess and meanness. When the canoe is finished, it is launched and taken fishing for one or two days. This fishing is termed *wakayina te vaka* (oiling the canoe). The biggest fish caught is given to the head carpenter, the remainder, after gifts (*matanga*) have been made to the chiefs, goes to the feast (*vaikaualinga*) for the canoe builders. A good catch of fish for the new canoe is called *wakayinanga matala* (lucky oiling). At the final feast (*mallinga*) for the workers and for those who have assisted in providing food to finance the construction, every endeavor is made to have a great display of food. At this time gifts, depending on the size of the canoe and the wealth and status of the owner, are given to the builders. Average gifts in former times for a large canoe were: for each assistant carpenter, one fishing line of *vaso*, one anchor line of sennit, one paddle, and one pearl-shell fishhook; for the chief carpenter, the same in addition to one sennit *malo* and one fishing rod, preferably a bonito rod, complete with four or five bonito hooks.

[342]

The amount of food distributed to recompense workers building or thatching a house depends on the size of the house.

For one average-sized sleeping house, 1,600 nuts, 800 *maauu* (talo puddings, each weighing about 8 ounces), and four pigs were provided; 100 nuts, 100 *maauu*, and one pig were distributed among the staff that killed and cooked the pig and prepared the talo; of the remainder each man and woman received two *puna* (pieces of pork 5 × 4 × 2 inches); each man received seven *maauu*, each woman five *maauu*, each child one *maauu*; each man and woman received 20 nuts, each child one nut. This feast, originally prepared for the workers, who were drawn from the hymn-singing group (*pupu imene*) of the village, was divided among the village as a whole because of the great quantities of food. The owner of the house acquired increased status through this inclusion; everywhere remarks were made about his generosity.

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To celebrate the completion of the present London Missionary Society church, each village in turn feasted the whole island. These feasts were the largest that are remembered within historic times on Pukapuka. Four talo puddings, each weighing about 5 pounds, were provided for each man and each woman; one pig for each man; 1,000 nuts for each man and each woman, with proportionately smaller amounts of all these foods for each child. Even though quantities were given away to a trading schooner that happened to be visiting the island, large amounts of the food were left to rot, proof that the time was one of great feasting and abundance.

Feasts are held in each village at Christmas time, when in alternate years groups of men and of women visit and dance in the villages away from home. Each village is host to these groups of visiting dancers, and provides food

1/2. [i.e, to prevent its being harvested--analyst.]

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to distribute among them. The food prepared by Yato village for Christmas, 1934, is typical of the amounts distributed: 104 *ava* fish from its fish pond, 500 cooked talo tubers, 100 limes, and 37 papayas from Motu Kotawa, 210 drinking nuts and 20 bottles of coconut and salt-water sauce (*tai*). This was divided among about 100 visiting women.

Feasts

The important part played by the food division in distributing wealth throughout the community may be best seen in a summary of the characteristic features and types of feasts. The Pukapukan feast (generic name, *inu kai*) does not connote an eating together by the parties to the feast. The essence of the feast is a food division. The food is collected and then divided among all concerned, often among the people who have themselves provided the food. It is then taken away and eaten by each household group in the privacy of its own cook house or near by. The Pukapukan *inu kai* is a mechanism whereby stimulus is provided for the extra production and distribution of food on socially set occasions, that all concerned may eat more abundantly than usual and by this eating symbolize a bond of relationship between two groups of people.

To honor another person, a man or woman sends chicken, nuts, and uncooked talo. The gift, also termed *inu kai*, is cooked and eaten in privacy. On an enlarged scale, the same mechanism prevails for feasts, save that the division of collected food operates to give back to each approximately the amount of food that he has contributed. The amount of food expected from each household is settled beforehand. Anyone who fails to contribute accordingly does not share in the division. In this way, it is assured that the contributions will be equal in amount and quality and that no one will be unfairly favored in the subsequent division. All contribute, share, and eat the same foods. For feasts to pay workers for their services, relatives are expected to contribute food. The person for whom the work is being done is expected to contribute in quantity or quality sufficient extra food to ensure that relatives do not suffer too severely in the division.

Named Pukapukan feasts are:

1. *Monotanga*, a big feast for the island. Occasioned in former days by the induction of a chief, today it marks the completion of some village or island enterprise, such as the building of church or meeting house. The feast might be provided by all three villages at one time or by each village in turn for the other two villages. At a chiefly induction, arrangements were handled by the sub-chiefs and the group of elders (*tupele*), who decided the nature of the contributions (amount of food, size and variety of talo dishes, kind of fish, etc.) to be made by each village. For such an occasion as this, the paternal lineage of the chief might provide the *monotanga* for the rest of the island, if the lineage were wealthy in food supplies and wished to make a grand gesture indicative of its wealth. A well-remembered *monotanga* feast occurred in 1916; the talo harvest

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on Motu Ko was so large that Ngake village made a present of 2,000 talo tubers to each canoe from the other two villages that went across to Ko to get the food. This was an act of generosity, marking no set occasion.

2. *Lauaya*, a village feast held today on the completion of some village activity. It formerly occurred on the rising of the Pleiades to celebrate the beginning of the season of plenty. It was timed to coincide with the lifting of the prohibition (*lasi*) on village food reserves. The communal gathering of food for such a feast is also called *lauaya*, as *lauaya kauau* (crabs), *lauaya manu* (birds). A *lauaya* after a tapu period ensures that after the period of privation the special foods will be shared among all the villagers. If taro, nuts, and fish are plentiful when the tapu is raised, the *lauaya* feasting may last for one or two moons. After a preliminary survey of the food resources, the village men decide how many divisions there are to be in each moon and how many moons the food is likely to last. Starting with the first night of the new moon, divisions may be made every 10 days, the last one to coincide with a new moon, either in the first or second month after the commencement of the feasting. This emphasis on the moon as a governing factor in the *lauaya* feast links with the custom of replanting taro and other food plants on the days of the new moon to ensure good growth.

3. *Ngaluenga*, the feast which is held for a village guard at the end of its service in the reserve land or to pay the workers thatching a new house (pp. 36, 76).

4. *Wakomalienga*, the feast provided by the owner of a new canoe or of a new sleep house (not cook house) for the food contributors, the workers, and the principal people of the island. It is a bigger and more elaborate food division than the *ngaluenga*, though not elaborate enough to be classed as a *monotanga*.

5. *Kavehuu*, a feast celebrating the end of a fishing contest (*maloma*) or other inter-village contest. The food is provided by the whole island. Formerly the old men's group and the sub-chiefs decided on the contribution to be levied from each household. Today this levy is fixed by an informal meeting of village representatives.

Other feasts discussed in their special context are:

Warle, tauuayanga, and *puaki*, food divisions for the birth of children; *uaikinuu*, food division on the occasion of an important marriage; *puyia uale* and *lulukunga*, feasts at death ceremonies; *lauhuu*, food divisions held at the command of the chief to mark his induction, the birth of an heir, or a death.

Inu kai o te uua is a food division among members of the maternal lineage held on no set occasion, but whenever there is abundant growth of taro in the gardens controlled by the lineage.

Special names are given to the feasts of the paternal lineages:

Lauuatangi (animal intestines), feasts of the two Ngake paternal lineages; *malolo alai* (flying fish on the reef), feasts of the Yato lineages; *lingolingo* (land shells), feasts of the Loto lineages. These three names refer to the fishing set-up of the three villages. Ngake and Yato are the rich fishing villages with plentiful supplies of fish for their feasts; Loto is poor in fish supplies and the reference to land shells is indicative of the small amount of flesh food that this village could supply its guests. For these feasts, the reserve lands of the villages are opened by special arrangement, and special delicacies are expected—birds from Kotawa, turtle from Ko, and extra supplies of nuts from Uta. A paternal lineage gave a feast of this type at the conclusion of some special work—the building or rethatching of its god house, clearing the ground around its religious structure, clearing up its cemetery, building a new *yionga* (religious avenue). When other paternal lineages learned that one group proposed to hold a feast, they all joined in sending courtesy gifts of food.

The mechanism is: a Ngake lineage is giving a feast; each household of the Ngake group is levied so much prepared taro; each household makes this amount of taro food and extra taro puddings for friendly households in the other villages which have inti-

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mated privately that they will make a food contribution. The levied amount is sent to the main food collection along with the food received from the friendly households; when the food division is made, each friendly household receives in return from its Ngake friends the amount that it contributed, but the return gift is taken from reserve stocks that the Ngake household has made, over and above its levied contribution. A little extra food may be taken from the share of the Ngake household and added to the return gift so that families from other villages may receive the precise amount of food that they contributed plus a little more from the main division. The reciprocity is complete, but the addition to the return gift, a bit of fish or a few nuts, creates the cultural fiction that the host lineage has fulfilled required patterns of generosity. The food exchange has helped seal bonds of friendship between two households, without seriously impoverishing the hosts.

Official food dividers (*tangata tau popoa*) function for the big feasts:

Formerly, the group of elders (*tupele*) chose its own food dividers for the fish brought to it by the men's fishing groups. The chiefs had their own dividers for *kaukava* feasts, as did the paternal lineages and villages for their feasts. The food dividers were skilled men. Their position was not hereditary; if they were careless or cheated, they were summarily dismissed. With the exception of the dividers for the old men, who received certain pickings but who might not share in other foods reserved solely for the chief, the food dividers were supposed to share equally with the people for whom the division was made, though in fact they might secretly reserve for themselves as their own share better portions of fish or slightly larger talo puddings.

When the *tangonga* group of fishermen (p. 281) returned each day from fishing, the canoes were met by the two food dividers for the old men, who carried the fish from the canoes to the dividing place. When neither of the food dividers was able to carry a big fish to the meeting place (*awanga*), the old men called for volunteers, and the man who could carry the fish was given the privilege of dividing it.

FOOD PREPARATION

The staple foods of Pukapuka are fish, coconuts, and talo. Fish and coconuts are eaten every day, talo less often; but talo is important as a quality food which gives variety to an otherwise monotonous diet. Most talo dishes consist basically of a mixture of talo and coconut cream (*lolo*). Two standardized methods of wrapping food in bundles preparatory to baking are used only for talo dishes (fig. 6). Each food eaten, whether fish, talo, or coconut has a definite food complement (*kinaki*) which is eaten with it to make a complete meal.

The two methods of cooking food are oven baking (*tao*) and grilling (*tunu*) on hot stones or embers. Grilling is the preferred method for cooking fish.

Fire

Fire (*ahi*) was formerly produced with the fire plough. The method was demonstrated to me. The hearth stick of *puapua* wood is called *lakau ika ahi*. The rubbing stick, also of *puapua* wood, is *kaungti*. The hearth groove is *ikanga*. To rub the stick on the hearth is *ikaika*, and to make fire thus is *mata ahi*.

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lands, he grills fish for a meal; when a feast is being cooked, a man assists his wife and children; when his wife is sick or gadding about, he may cook because no one expects him to go hungry; if a man is a cripple and debarred from men's work, he may cook; if there are no older sisters, a boy may help his mother prepare the Sunday feast. The one berdache on the island spends much of his time cooking with the women. Men always prepare pigs for cooking.

In former days it was tapu to eat or to carry food into the sleep house. All eating was done inside the *mate imu* or out-of-doors. Even today an adult Pukapukan rarely eats in a sleep house, though children often carry food into the house.

COCONUT DISHES

Coconut has always been the basic food of the Pukapukans. Unlike talo and fish, which are not sufficiently plentiful, coconut in some form is eaten every day. Informants regard it as the best of Pukapukan foods because it gives the greatest variety of dishes. They say that the minimum number of nuts a man in good health requires each day to keep him strong and healthy is 10 large-sized drinking nuts, besides plenty of fish. During the great famine the daily ration of each person was four nuts which, with a little fish, was the only food. This was enough to maintain life but not enough to keep the people strong.

Coconuts are eaten exclusively by sick persons because of the tapu on their eating fish and because of the scarcity of talo. No stage of the nut or any portion of it is tapu at this time.

The coconut in its various stages is most often eaten uncooked. Methods of eating and preparing are:

1. The sweet husk of the *mangalo* is chewed (*ngaungau*) and sucked until it is dry. The edible husk is not grated for use as a flavoring in other dishes, as it is elsewhere, but is eaten ungrated and uncooked by itself or with a complement of hard, mature coconut flesh (*ipiipi*) or fish.

2. Occasionally *mukomuko* is baked (*mukomuko tao*) and eaten with *ipiipi*. The leafy growth or tissue (*miko*) in the heart of the coconut tree is eaten only when a tree is blown down or cut out. It is never taken from a living tree; to do so would kill the tree.

3. Nuts at the *mate* and *hatihati* stages are eaten raw or are baked (*niu mate tao* and *niu hatihati tao*) and eaten without a food complement (*kinaki*).

4. The following is the method employed in making *niu halokalo* from the *niu mata*: The drinking liquid is poured into an empty shell, and the nut is grated with the *halokalo* implement. Then the liquid is poured back, and the grated flesh and liquid are stirred together (*yeu*). This is especially an infant's food. From the *niu mata* is also made *ipu niu halokalo* by baking the unopened nut in the oven or by cooking on hot coals or stones a nut opened at the eyes and propped up on stones. After baking or cooking the flesh is grated and mixed with the hot liquid. This is prepared especially for sick persons. The unopened *niu mata* is cooked on hot stones (*niu mata tunu*). The hot liquid is considered especially beneficial for parturient women.

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5. The absorbing organ of the cotyledon (*uto*) of the nut at the *uto* stage is eaten raw (*uto mata*) with a *kinaki* of the *ipiipi* flesh that surrounds the *uto* or is baked (*uto tao*) without being removed from the shell.

6. A recipe (probably an importation from the Cook Islands) was given for *uto poi*. Baked *uto* is removed from the shell and pounded with the *tuki* in a *kumete* until soft, then coconut liquid of the *niu mata* or *niu kalokalo* is added to the soft *uto* and the whole thoroughly mixed and eaten.

7. A dish called *yomi* was prepared in former times by allowing the flesh of a drinking nut at the *niu matamotomoto* or *niu mata* stage to rot in sea water for 5 to 10 days or until the flesh was thoroughly decayed. Coconut cream was mixed with the flesh, the whole was baked, and *yomi*, a thick, sour, creamy food resulted. Tradition states that *yomi* was the favorite food of the Yayake people when they lived on Motu Ko and was served by them with a *kinaki* of *likoliko* talo pudding.

8. From the nut at the *yakali* or *niu papaku* stage is obtained the *ipiipi*, a common *kinaki* for fish or other foods in the absence of talo. From this *ipiipi* also is made *lolo* (coconut cream). The nut is split into two and grated (*vulu*) on the grater (*tuai*). The *ipiipi* is grated either finely or coarsely, depending on the excellence of the grater, whether the teeth are perfect and closely set or imperfect and irregularly spaced. To grate finely is *vulu wakaliliki*; to grate coarsely, *vulu wahapatapata*. These two types of grating are merely the characteristic results of particular *tuai* and are not related to the preparation of special dishes. It is desired at all times to avoid coarse grating: in proportion as the grating is coarse, the amount of *lolo* wrung from the gratings is less; and the finer the grating, the more the *lolo*. The gratings are picked up in the wringer of coconut husk fibers (*tauanga*) and wrung (*kuku*) into wooden bowls or coconut shells. The refuse (*ota*) left in the wringer after the oil is expressed is thrown away.

COCONUT OIL

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Coconut oil is used as a hair beautifier and skin perfume. To rub oil into the hair is *omoomo*; to perfume the skin, *pani*. Oil was used mainly in the evening after bathing, when the day's work was finished. The three kinds of coconut oil are made as follows:

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1. *Valikonga: yakali* flesh is grated and wrung out into a coconut cup; shredded leaves and flowers of sweet-scented plants are added to give fragrance; according to preference, *tiale*, *nou*, *nowa*, or *maile* leaves and flowers are used. The preparation is baked over night in the oven and is ready for use the next day.

2. *Yinu tutu: yakali* flesh is grated; leaves and flowers are added; the gratings are not wrung out but are placed in a coconut shell and exposed to direct sunlight for two or three days or until the gratings disintegrate and the oil separates; the oil is then wrung out into a shell. A hot stone previously fired in the oven is dropped into the oil, which is allowed to cool before being used.

3. *Yinu takataka tutu:* the flesh of the *takataka* nut, which can not easily be grated, is rubbed (*olo*) on the *purgo talatala* rubbing stone. Flowers are added to the rubbings and the whole is wrung out and placed in the sun until the oil disintegrates. It is then fired with a hot stone.

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All types of oil are considered equally desirable. A woman makes the one she prefers. The most common is *valikonga*, as *yakali* nuts are more readily available than *takataka* nuts. The importance of oil to the Pukapukans is well brought out in the stories and chants, where the lover always makes a careful toilet with oil before leaving the house.

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TALO DISHES

262 621 The supply of talo varies from village to village and from household to household and is conditioned also by seasonal factors:

Ngake owns Motu Ko, and its extensive talo beds allow this village to draw on a large supply of talo. But because the reserve is distant from the village it is only during visits there to make copra that the villagers eat talo every day without stint. They bring back large baskets of talo on the return from the reserve. When this supply is exhausted, the village depends on the very limited number of talo beds on Wale, save on the occasion of large feasts when the women make special trips to the reserve to harvest talo. In general, then, Ngake does not have a large supply of talo and has to be as careful as Yato in its everyday use. Loto, on the other hand, has a regular and large supply of talo in the reserve of Uta on Wale on which it can draw constantly and extensively. This is a factor in the arrangement whereby members of households in other villages affiliate (*tau*) with Loto, so that some of this supply of talo is drawn upon by the other two villages. Yato village, with only small beds on Wale, has the least talo of the three villages. During their visits to Motu Kotawa the women fetch talo from Wale, making a constant drain on these beds throughout the year. Individual household differences within the three villages have resulted from vagaries of lineage and private ownership of the beds not communally owned.

[527] 574 264 At the present time talo is regularly harvested on Saturday in preparation for the weekly feast that follows early morning church on Sunday. A little talo is occasionally eaten as a special treat on Saturday evening with some of the fish caught that day. Left-overs from the Sabbath feast are eaten on Sunday night or Monday. On the remaining days of the week talo is rarely eaten. Exceptions to this are all holidays and special feasts. From Monday to Saturday, in the normal run of events, most households eat exclusively coconuts (drinking nuts and their flesh, *uto, takataka* nuts, *ipiipi* and *wukomuko*) and fish. Pandanus fruit and an occasional banana or papaya are added to this diet.

No talo dish is reserved for special occasions; any dish is made when the spirit moves. *Mawu* and *olo* are made for large feasts oftener than are the other dishes. Each must have its proper food complement. In 262 general, the *kinaki* for talo puddings is fish or pork. Special *kinaki* are mentioned for individual recipes. Informants characterize all the talo dishes, without exception, as sweet (*malie*), delicious (*vene*), and very good (*lelei lava*).

252 Talo corms are prepared for cooking by scraping (*tele*) the mud off on a scraping peg (*tukituki*) with a coconut-shell scraper (*kai*). The corms are not washed previous to further treatment. To wrap talo in leaves and make the food packet is termed *yuwi*, sometimes given as *awi*. Talo preparations are:

1. *Lulu.* Whole corms are placed on a pile of *puapua* leaves (*wuwao ki loto o te lau puapua*). The ends of the leaves are folded over the talo and the bundle tied with coconut leaves (fig. 6, *a-b*). The food packet (*lulu*) is baked in the *imu* for 1 or 2 hours.

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11. *Wawa tunu pukapuka.* Peeled corms are placed on heated oven stones (*imu na pu*, the oven that has been burned) and allowed to cook for an hour or more. They are served with *ipüpi*.

12. *Wawa tukituki tunu. Wawa tunu pukapuka* is placed in a bowl, grated *yakali* nut flesh is added, and both are pounded until well mixed. *Lolo* is added to the mixture and the food is served in shells. The dish is considered very rich and is not often made.

13. *Pikopiko.* Very small, young talo cormlets (*pikopiko*) are peeled with the fingers. The cormlets and their petioles are broken into small pieces, placed in banana and *puapua* leaves, covered with *lolo*, and baked.

14. *Pota ulukau.* The outer skin (*kili*) of talo petioles is stripped off. The petioles and young leaves are shredded into small pieces, wrapped in *puapua* leaves, and baked. The food is then placed in a bowl, grated *ipüipi* (*ota*) is sprinkled over it, and the whole pounded together. Coconut water is added and the food served in *ipu*.

15. *Pota ulukau puaka.* When available, layers of pork fat are alternated with layers of petioles and leaves, and the whole baked in leaves. Before serving, *lolo* is poured over the food to make a rich, flavorsome dish.

16. *Tingapula.* Young talo petioles are peeled, broken into small pieces, and placed on *puapua* leaves. *Lolo* is added, the packet tied as for *loloi*, and baked.

Pulaka is considered less tasty than talo and is only eaten when the flavor of talo becomes tiresome or when talo supplies are low. Most of the dishes made from talo are also made with *pulaka*, excepting *pikopiko*, *poke*, and *pota ulukau*. The talo dish called *lulu* becomes *tao paku pulaka* when made with *pulaka*; otherwise the names are the same, for example, *loloi pulaka* and *mawu pulaka*.

Uncooked talo is buried in the ground near the cook house for preservation. It will keep thus without rotting for about three weeks. Talo brought from Motu Ko in large quantities is treated in this way. Cooked talo or fish, left over from one day to the next, is preserved by baking in a fresh oven. It is placed in the oven overnight or kept in a basket tied to the cook house rafters overnight and placed in the oven on the next day. Large talo puddings have been known to be kept for a week or more without the *lolo* in them curdling (*vi*), simply through being rebaked day after day, though after much rebaking the puddings get hard and lose flavor. The unusual thing about such preservation is that the puddings should remain so long uneaten. This occurred however after island fishing feasts. One family got a very large share of talo from the division and then had a very bad week for fish, catching practically none. Without fish for a food complement, they could not eat the pudding and so kept on preserving it in the hope that the men of the household would soon get fish.

For rebaking, talo puddings are either wrapped in *pulaka*, banana, or *puapua* leaves (*yawi ki te lau pulaka ma*), or tied up in coconut leaflets (*takai ki te launiu*). The leaflet packet is preferred when a well-browned pudding is desired. Pairs of coconut leaflets are stripped from the midrib. One leaflet is twisted lengthwise round the packet, the second widthwise, and the packet fastened securely. To make them more pliable, the leaflet ends may be first heated over a fire.

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OTHER PLANT FOODS

No origin myth is remembered for pandanus. Though it is not cultivated, pandanus grows abundantly. The keys (*penu*) may be eaten raw when ripe, with or without complement (*kinaki*). They may be sliced and baked (*wala tao*) and eaten with *ipiipi*. Grated raw and added to talo puddings (*olo wala* and *likoliko wala*) they give a sweet flavor. The juice of baked keys (*makano*) is used in the same way. The fruit is enjoyed by adults and children and provides an important flavoring and sweetening agent in the native diet. Children crack open the keys and chew the inner kernel. The woman in the moon, Yina, is said to be seen kneeling before a stone cracking open pandanus keys.

The banana was among the items fished up by Maui. Of the several varieties of banana (*wuti*) growing on the island today, *wuti pukapuka* is said to be old and indigenous. The trunk of the tree is called *pu wuti*. *Lito* is a small banana leaf; *lauwuti*, a large leaf, used extensively in cooking as a food wrapper; *laumatu*, the old, dried, and withered leaf; *hau*, the leaf midrib; *kili*, the fruit peel; *kiko*, the flesh. Bananas are not abundant on the atoll and are not important in the daily diet. They grow in the talo beds and close to the houses. When available, they are much in favor as gifts. A household may get a small bunch of fruit from its trees once in five or six months. Bananas are ripened by hanging or by burying. A bunch (*ta*) of green fruit is cut and buried in a hole in the ground 2 feet deep and lined with coconut husks. The bananas are placed on a bed of husks and covered with coconut mats (*polapola*), then more husks, and finally with earth. After three nights the bananas are ripe and are eaten raw or cooked on hot stones. If a meal is made of bananas the correct complement is *ipiipi*.

Some sugar cane (*to*) is grown today on the talo bed embankments. It is owned by the villages and at infrequent intervals is divided among all village members. The cane is peeled with the teeth and chewed by children and adults with great delight. The cane is *pona*; the rings around the cane, *va*. The few papaya trees (*ninita*) and lime trees (*tipola*) are grown on Motu Kotawa and the fruits divided among all members of Yato village. One breadfruit tree on the atoll was planted by a man from Aitutaki. Its yield of fruit is negligible.

FLESH DIET

There were two staple flesh foods in former times, sea foods (fish, turtle, shellfish, crabs) and sea birds. (See pp. 27-31.)

No tapu against the eating of raw fish exists in Pukapuka, though visitors from Aitutaki have unsuccessfully tried to introduce the idea. Actually fish is not often eaten raw. A fishing crew occasionally eats some

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of the catch raw to stave off pangs of hunger. *Kakai*, *pala*, and other big fish that are particularly tasty raw are usually caught on Saturday and must be saved and cooked for the Sunday feast. *Ato* (milk mullet), a small fish tasty when raw, is caught only by Yato village from its pond and is generally baked for village food divisions.

Large fish are split before cooking into four longitudinal quarters (*io*) by cutting along the longitudinal black blood canal and dividing each half into two. In the fore sections of the two bottom *io* is the choice part of the flesh called *pakoko* (fig. 7). It is fat and tasty and much preferred by pregnant women.

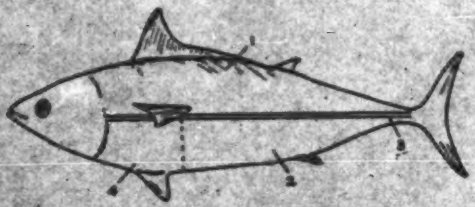

FIGURE 7.—Division of albacore fish: 1, upper sides, *io;* 2, bottom sides, *io alonga*; 3, dark-colored blood canal; 4, fat portion of flesh (*pakoko*) esteemed as special delicacy.

Small fish are not cleaned or scaled (*uulauula*) before cooking. Larger fish are roughly scaled by working the thumb along the skin from the tail to the head. Head, fins, and internal organs are not removed. Every part of a fish is eaten.

Only two methods are used for cooking fish: grilling (*tunu*) and oven-baking (*tao*). Fish to be eaten immediately are always grilled; fish to be eaten later in the day or on the next day are baked. For grilling large quantities of fish, a special fire is always built, even though another fire is already burning in the cook house. The grilling fire is built only of coconut shells (*ugaipu*) of the *yakali* or *uto* stage, which burn with a clear, fierce flame. The fish are laid on the glowing embers and turned from time to time until cooked. Small fish, particularly *kelouna*, are spitted on a coconut leaflet midrib, about 20 fish on each midrib, with all the heads facing one way and all the tails facing the other. They are grilled thus.

When there is a larger supply of fish on hand than can be immediately eaten, fish is preserved by sun-drying (*uukala hi io ia ke pakapaku*). Fish that has been dried for several days will last indefinitely. Large fish—*kakai*, *pala*, and *ato*—are first split into the usual four sections and twice oven-baked. Each section is then cut into smaller pieces, placed on *laulau* food platters, and hung from house eaves to dry in the sun. During the flying-fish season when there is an abundance of fish, flying fish are partially grilled on hot stones and then sun-dried. They keep for a long time without spoiling.

Turtle flesh is grilled. The only correct complement for turtle in former days was a taro dish. It was taga to eat coconut with turtle. A man named Yawenga broke this rule, so the story goes, and the next time he went turtle fishing he was caught by a male turtle, which sounded and drowned Yawenga and then took his body to the legendary land called Valu Wetuna. It is likely that this taga against mixing turtle flesh and coconut is associated with the displeasure of the turtle when the woman Ying broke a coconut on his head. Turtle ova (*uua*) are eaten as well as the meat, fat, and carapace, raw or grilled. Probably turtle eggs were not eaten formerly but were left to hatch, an inference from informants' statements that it is only in recent times, since people have taken the eggs of the turtle from the nest, that turtles have been dying out.

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252 251 *Tridacna* shellfish (*payua*) are eaten raw or mixed with coconut cream and baked in leaves in the oven. Persons especially fond of them collect large quantities which they preserve for future use or for periods of want by stringing them on coconut midrib fibers (*kaiava*), 30 to 40 *payua* on each string. The strung *payua* are baked for a day or overnight and then hung from house eaves to dry in the sun for about 10 days. Thereafter they are placed in baskets and stored until wanted.

252 262 Wild birds are not preserved in any way. They are grilled and eaten immediately after they are caught. A bird is plucked at the beach and the feathers allowed to drift anywhere. Head and claws are left attached to the body and the bird is not gutted or cleaned in any way. A length of green coconut midrib, thrust down the throat of the bird and into its stomach, is used to hold the bird over the flames and embers of a fire made of *ngaipu* coconut shells until it is suitably grilled. All the bones are picked clean; the internal organs with the small fish and seaweed in the stomach bag and intestines are considered especially tasty morsels.

262 231 252 The pig (*puaka*) and the chicken (*moa*) were introduced after white contact. The pig, brought by early missionaries, is eaten today only at feast times or in food divisions to pay workers for services.

A pig is led down to the beach and allowed to wallow in the sea to clean its skin before it is killed by choking. A stout stick is placed across the throat of the animal lying on its back with its legs held or tied. Men stand on each end of the stick until the animal is dead. The dead beast is singed (*sumula*) with flaming coconut leaves and the skin scraped (*vaivaiu*) with a coconut shell. It is washed (*palupalu*) again in the sea so that the skin is clean (*mahitahita*). The animal is then placed on a bed of coconut leaves laid on the ground. The stomach is opened up, the internal organs (*ngakau*), heart and liver, are removed and washed in the sea. The blood is caught in coconut cups and baked in them (*toto momoyo*, cooked blood). The intestines are grilled on hot stones; the liver and heart are wrapped in banana leaves and oven-baked. The whole pig is baked in an oven for 4 or 5 hours, according to the size of the animal, and then butchered and shared among the participants in the feast. The head (*ulu*), reserved for the chief, is cut off first; then in order the fore legs (*lima*), hind legs (*vae*), ribs (*ivi kayokayo*), back (*tua ivi*), and finally the hind quarter (*wulimuli*) are butchered. All these portions, together with the heart and liver, are again subdivided into the required number of smaller portions (*pono*). Save for the special portion for the chief, there is no reference in this division to rank or status.

[554]

[177] 231 262 Hens and roosters were introduced by a captain of a trading schooner whom the Pukapukans called Wuluwulu (Hairy-one) when he visited Pukapuka some time after the mission was well started in Samoa but before it was established in Pukapuka.

431 252 Chicken eggs play no important part in the diet today. It is probable that they were formerly left in the nests to hatch. At the present time eggs are used as gifts to visitors. We saw only one Pukapukan eating an egg, a child eating a hard-boiled egg. A great deal of trouble is taken over the raising of chickens, but at the present time they are rarely eaten. No household has enough chickens to have a chicken dinner very often. Only once, during the Christmas feasting, was a native family seen eating a chicken for a meal. A woman or a child chases the chicken to be killed, then hits the bird on the head until dead. Women or girls pluck the feathers, which are thrown into the sea. The body is singed, the head cut off, and the internal organs removed. The heart and liver are washed and baked on hot stones; the body is wrapped in banana leaves and baked in the oven. A live chicken, talo, and nuts are the usual gift feast sent to honor a friend. Only chickens found strangled in the trees or killed by the women's committee when found in the talo beds are regularly eaten by their owners.

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[597] 851 621 602

the village of its adopting father. A child who is not adopted and who continues to reside with its parents in the village of birth may be "given" for economic or sentimental reasons to a male relative, blood or affinal, of either parent, to be affiliated by him with his village. A man refers to a child whom he sponsors in this fashion as his *tuanga tau*. If he were related only by marriage to the child's parents, he would nevertheless continue to sponsor the child even though he later divorced the woman through whom the relationship was traced. A person who is sponsored by a man in another village is closely united to him by ties of sentiment and interest, even though they live apart. A man would not willingly kill his enemy if the enemy had at one time been his *tuanga tau*, even though of distant relationship. (See story of Tuiva, p. 395.)

621 262

The result of the practice of sponsored affiliation is a redivision of food between the three villages: persons not residing in a village receive through membership in it a share of its food, including its unique products (as Yato's fruits, limes and papayas; Loto's sugar cane; or Ngake's supplies of crabs).

591 261 621

In most households only one or two children of a large family affiliate away from the home village. Where there are only two or three children in the family they normally affiliate through their father. Sometimes, though rarely, a *tuanga tau* child takes up residence in the household of the man who sponsors him. This is acceptable to the household because it means a gain of extra food shares (*tasi tuanga tau*). The food share of the individual is almost always more than he himself can eat at one time and so must be shared with other members of the household to avoid spoilage.

592

The shift of a member from one large household consisting mainly of young children to a small related household consisting of adults only is recorded. The motive of this exchange was to increase the food shares of the smaller household.

621

The following is an example of the application of village affiliation:

602 592

A widow who is head of a household (41 in table 5, p. 248) is sponsored in Loto by her brother. The oldest daughter is sponsored in Ngake by her mother's second brother, who resides there. The second daughter is sponsored in Loto by the mother's brother, who also sponsors the mother. The next child, a son, is sponsored in Loto by a distant relative of his mother. Another son, adopted but not living with his adopted father, is a *tuanga tau* of that man in Ngake. The next son, the only one affiliating in the village of residence, is a *tuanga tau* of his mother's sister's husband. The infant son affiliates in Ngake with the mother's brother. With no adult male food gatherer in the household, the affiliation arrangement of the children in all three villages brings in the maximum share in food divisions, as all but one member affiliate in Loto and Ngake, the two villages having the largest food reserves. The mother is also able to maintain close ties with her relatives in other villages so that she is not forgotten when a related fisherman makes a good catch. These results are all achieved without sacrificing children by adoption; when the children grow up, the mother is assured of ample support in her old age.

[888]

591 621 623

The shift of an individual from one household to the next within the same village involves no change in village membership. The shift from a household in one village to one in a different village is accompanied by change of affiliation:

Each village holds an annual meeting to make up its membership rolls governing food divisions, organization of work, and composition of reserve land guards and contest teams for the succeeding year. At this time a man who wishes to change his affiliation or to take on a new affiliate from another village requests the head man of the village (today usually an Island Council member) to add his or the child's name to the village rolls. Village members discuss the names of applicants which are added to the village lists if no valid objection is offered. The new member, called a *wilo* of the

1:Beaglehole and Beaglehole E-5 (1938-9)1938 Puka pukans

643 613 782

she remained a virgin all her life and did not go through the adulthood rite. From the time she was chosen she lived in a special house called *te wale ya o te mayahitanga* (the sacred house of the sacred maid). The induction of a *mayahitanga* was described as follows:

The sacred maid wore a pandanus kilt dyed red with the juice of *welo* berries, a headband of *welo* bark, also dyed red, and pearl-shell ornaments. She was placed in a horizontal position with her back to the ground, lifted high in the air on the palms of men of her lineage, and carried to the sacred enclosure of the principal god of the lineage. All the other people of the lineage, and the general populace, if it wished, followed with uplifted palms and hands. As the procession reached the enclosure they chanted the song "Kai yoki yokio", which was also chanted at the burial of a chief. At the word "Ui", the girl was placed before the worshiping stone (*wea*) of the enclosure. The executive then dedicated her to the god with a prayer (*tahua te wai*). No informant could remember the exact form of this prayer, but it contained reference to the increased prosperity of the island during the life of the sacred maid. Pau thought the following extract from an ancient prayer of obscure meaning was recited at this time:

Kia[19] wai mali wuniu	Let the clusters of nuts be full (?)
Kia wowolo te wawa	Let the talo tubers grow big
Kia tautungatunga	(Addressing the *mayahitanga*) Beckon to the god (that he may answer this request)
Kia matolu te ika	Let the fish be numerous
Kia pi ki te tai	Let (feces) flow to the sea (in quantities from the abundance of food eaten)
Ke elo te wenua	Until the land stinks
Kava ya te tangata	Countless the feasts for the people

After this prayer, the *mayahitanga* was considered dedicated to the god. She was then carried about the island on the uplifted palms of her relatives and shown to the people. Everywhere she was greeted with the remark: "Koe tauyala wua koe ki mua" (You are making a circuit of the island—to bring us prosperity). The ceremonial tour finished, she was taken back to her house and her guarded life began.

613 262 [302] 643

The *mayahitanga* was guarded by old female relatives (*leowi* or *tauta*). She was kept inside her house for two or three months at a stretch, her skin carefully oiled so that it became exceedingly fair. She was fed the choicest foods: parts of the breast and green fat of the turtle; the *toitua* part of the flesh of albacore and other large fish which stretches from the dorsal fin to the tail and contains fat white flesh; all kinds of fat fish such as *mulau*; and the breast meat of birds. All the skinny portions of her food supplies, lean fish, wings and legs of birds, were eaten by her duennas.

613 643 [195]

The sacred maid of the chiefly lineage of Loto lived close to the place Matala, the other sacred maids living similarly close to their cemeteries. From the residence of the *mayahitanga* to the lagoon beach was a specially cleared path called *yionga ala* (not to be confused with *yionga mauli*, cleared paths built as symbols of deified ancestors). This path was tapu to commoners save at times once every two or three months when the maid walked on it to show herself (*mahayuui*) to the populace. Then the commoners

[19] *Kia*, an archaic particle used in proffering requests to the god.

1;Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

to this god to send fish close to the surface so that they might be more easily noosed.

Te Maungatu, another god of Yamaunga, seems to have had no special powers other than those relating to the general protection of his worshipers.

Te Mangamanga, god of Yalongo lineage of Yato, added to his general duties special duties which included the protection of the reserve of Niua, its nuts, talo and timber, and also the control of all the *ngangie* wood growing anywhere on the atoll. If anyone wished timber from Niua for a canoe, or *ngangie* for implements, he went first to the priest of Te Mangamanga, who consulted the god; if the god was willing, the priest cut down the tree or the piece of *ngangie* and gave it to the person who had requested it. For an unauthorized person to cut timber, or to steal from the reserve, constituted a theft from Te Mangamanga, and the god was quick to punish with sickness. Whales that drifted ashore also came within the special province of Te Mangamanga; it was his priest who directed the cutting up of the whale and its division among the people. No child might eat whale flesh on pain of being made sick by this god. Te Mangamanga was sometimes called *atua pouli* (god of darkness) because he was supposed to inflict his punishment under cover of darkness.

Te Tawitonga, another god of Yalongo, hissed and frightened thieves stealing talo from the beds of Niua, or from those controlled by his worshipers.

Departmental Gods

Matalolau and Matalomea resided in the mud of the talo beds. Neither religious structure nor priest was associated with them. Every time talo was taken from the beds these two gods were remembered with a gift of three or four tubers left for them in the ground.

Kanitika was originally a god who controlled the sun. Because he did not order its heat to the liking of either gods or people of Pukapuka, the four gods Te Awuawu, Te Atua Vaelua, Ngaliyeyeu and Te Alangaoa removed Kanitika from the sun with a pair of coconut fire tongs and threw him to the earth where he landed in a flash of lightning. Some informants thought Kanitika went back to the sun in a chastened spirit, since which time the days in Pukapuka have been much cooler; others believe he changed himself into an earthly god, renaming himself Te Atua Pule.

Te Alongaoa, besides being a god of Matanga lineage with ordinary duties, joined with Te Atua Vaelua, Ngaliyeyeu and Te Awuawu to make a quartet of free-lance gods who at times had the attributes of culture heroes, at other times those of departmental gods controlling winds and seas. These four were greatly given to bickering and contesting among themselves. They were specifically concerned with the control of the winds. Te Alongaoa was god

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

776 821 of the south wind; Te Atua Vaelua was god of the north wind; Te Awuawu, god of the east wind; and Ngaliyeyeu, god of the west wind. The four gods were leaders of hosts of attendant gods who fought each other from their respective parts of the sky by throwing spears at each other. The spears were thought of as shafts of air and the speed with which they traveled caused the winds to blow. Thus when the winds grew strong the people said, "The spirits of the gods are fighting hard." Then the people went to the priests of Te Alongaoa and Te Atua Vaelua and asked them to intercede with the gods to call off the battle for the time being. If the winds of Te Awuawu or Ngaliyeyeu were rebellious, the people prayed to these gods directly.

Because of their control of the winds, these gods were directly interested also in the control of the sea, especially the natural perils of the sea. They were consulted directly, or through priests, before fishing or voyaging expeditions that they might favor the people with calm seas and gentle winds. In this control, they were joined by Talitonganuku, who was more interested in waterspouts and whirlwinds. Fighting between the gods was responsible for the abandoning of deep-sea voyaging. (See p. 408.)

776 362 613 Te Alongaoa and Te Atua Vaelua were also interested in fish, particularly in fish with pointed mouths like garfish, sword fish, needle fish. The priests of these two gods were not supposed to eat any of these fish; this is the only example of a food tapu associated with a god. The people of the lineage might eat these fish.

776 Te Awuawu and Ngaliyeyeu were sometimes called *atua lata tangaloa* (tame gods). They were considered more reliable than some of the lineage gods, and were consulted by all the people of the island when quick action or response was required. They could be consulted anywhere and at any time, on land or sea, and did not require the mediation of a priest. They were appealed to in sickness, for the curing of which their reputation was high. Though their home was in the Underworld, they were ready to come forth with the utmost promptness to help intercessors.

776 613 It is possible that formerly there were decorations and attributes associated with these gods that are now forgotten. Thus in an old chant, "Langona e te lulu i Matano", there is a reference to the carrying pole (*amonga*) of Ngaliyeyeu. This is believed by informants to refer to the fact that Ngaliyeyeu used a carrying pole to transport, perhaps symbolically, his power from one place to the next. He gave part of his power or protection, which by transfer was attributed to his carrying pole, to the sub-lineage Walangakula, another part to the Yato lineage Yayi. Hence these lineages sometimes refer to themselves in chants as *te amonga o Ngaliyeyeu*; they refer also to their worship of the carrying pole on the religious structure of the god. [301] With Ngaliyeyeu are associated decorations of *pua laukie* for his male wor-

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

more correct name would be *yele mauli*. Many informants were repeatedly questioned about this soul trap, separately and together, and all agreed that Gill must have confused a bird trap or bird noose which he saw hanging to a tree with the story he heard of the *matapili* noose in the Underworld. One type of bird noose, *yele manu* (fig. 4,*b*), consisted of loops of sennit suspended from a *puka* tree. It is significant that Gill talks about a birdlike representative of a soul passing into the *ere vaerua*. It is likely, I think, that in order to blacken the past, a convert made for Gill what he said was a soul trap. From the old chant, "Maka taku kupu ko te tonoanga", informants quoted the following phrases to confirm their point that the noose was used in the Underworld only:

Na yeles ko te talakelake	You were tied to the *talakelake* tree
Wakawiwi ake te mauli, koa mate, koa elo	(Your) soul was tangled (in the trap), died, stank,
Wakatautili ai tama i te pu o te puka a Tangi,	We were both thrown to the foot of the *puka* tree of Tangi,
Wakauiu ko te wale pontini . . .	Entered the house of a thousand posts (the house of Leva) . . .

If the soul trap was really an instrument of witchcraft, as Gill was assured, then it acted through the force of suggestion. The priest did not work over the insect or bird that passed through the noose with incantations in order to provoke sickness or death.

Several informants were questioned on different occasions as to their knowledge of black magic. Examples of black magic in western Europe were adduced to give them confidence, but even this lead got no results. Even if informants have willfully forgotten material on sorcery which must to them smack of heathen practices, one might expect some survival of precautions directed against sorcery in the treatment of objects closely connected with the person. But the Pukapukan customs governing the disposal of objects charged with high personality tension, as compared with customs elsewhere in Polynesia, where fear of sorcery led to rigorous tapus or the disposal of such objects, indicate that there was extremely little fear of sorcery in Pukapuka:

> The sea took care of adult excreta, and of most child excreta; no precautions are taken today to dispose of excreta of children too young to go to the sea. Adults expectorate anywhere. Finger and toe nails are cut anywhere; formerly they were bitten off and spat out onto the ground. According to informants, the hair was rarely cut during life, and was worn long by both sexes. Some informants said that hair clippings were buried; others said that hair was often cut from a dead person, particularly from the head of a deceased favorite child, and the hair plaited into a malo or else into a cord by which pearl-shell ornaments were hung on the breast. Formerly, if a woman's hair fell into food, the food was considered spoiled by this contact. When a tooth pained, it was pulled out, taken to the god house of the lineage and deposited there with a prayer to the god of the lineage that he send a new tooth to replace the one thus given to the god. Old clothes were burned or used as rags. Today clothes are worn to rags

[See p. 64, category 11/6 — and hyst.]

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukan

In reef-fishing contests, groups of three men, one man from each village, fish from separate locations along the reef for two successive days, stopping each evening at a mutually decided time. Each day's catch is taken to the village, the heads cut off and counted. Formerly the fish were counted on the meeting place of the old men. The village with the greatest number of heads wins the contest and has the right to chant and dance on the third day.

Flying-fish contests are held at night, usually for one night only. The fishing procedure is given elsewhere (p. 58). The canoes come back in the small hours of the morning and anchor in the lagoon. The crews come ashore, leaving one man on each canoe as a guard. In the morning the canoes are beached and the catch counted. The fish are cooked for a feast on the following day, when the winning village has the right to chant. During the season for flying fish the young men engage in netting practice (*taetae pena*) on the beach each evening. The practice nets are made from the aerial roots of the pandanus (*pulu* variety). The "fish" are pandanus keys. One man kneels on the sand with a pile of keys before him. One or two netters stand facing him about 15 paces away with nets in their hands. The thrower tosses the keys very quickly with one or both hands towards the netters, who attempt to catch them as they come flying through the air. Older men comment and give advice to the more inexperienced. The practice is considered as much a game as a serious preparation for the fishing by keeping the eye in training and maintaining skill.

Formerly the village men consulted the gods of the paternal lineage to procure good luck in deep-sea fishing contests (*maloma*). It was believed that the gods would order their attendant spirits to send the fish to the canoes of one village only, at the same time barring the fish from the canoes of the other two villages. As this was a challenge to the gods of the other villages to break down the barriers surrounding the canoes, each contest became a test of the powers of the gods of the respective lineages. The modern Pukapukan holds to this old pattern when the men of each village come together for a prayer meeting before each day's fishing (as they do for all other contests), and when one man of the fishing fleet offers up a prayer before the lines are dropped overboard.

Before an exhibition deep-sea fishing contest no deep-sea fishing was done for five days. On the first of these five days the men of each village met together to arrange canoe crews, and on the succeeding days they continued to meet to repair fishing gear. On the night before the contest the Yato men fished in their fishpond for *ava* (milk mullet) to use as bait; Ngake villagers went to Motu Ko to catch *atule* (herring) for the same purpose. On the morning of the fishing contest, the men collected other bait for the regular fishing. The trolling canoes (*vaka takitaha momao*, distant circuit canoes), which are a regular feature of these contests, were away by 3:30 a.m., one from Yato and one from Ngake but none from Loto because that village controls no section of reef or fishing pond from which it can draw trolling bait.

The trolling canoes are fully manned six-seater canoes (*yakeono*). They leave the reef by the passage and circle the atoll from north to east. Then they come back to the passage and circle the atoll from south to east, trolling for bonito and *pala* fish and looking for turtles. They join the fishing fleet on the fishing ground (*pakeke*) at about 3:00 p.m. and fish with the regular fleet for the remainder of the day. Their circuit of the atoll is made on both fishing days. The wife or other female relative of the captain of each trolling canoe provides the food for the canoe crew. Called the *pakupaku*, she prepares quantities of the taro dish *likoliko*, which she puts in the canoe each morning before the start. The canoes troll with bonito rod and hooks and with hand lines. When the crew rest from paddling, they fish with hand lines. All the countable fish caught by these canoes go to the general pile of village fish, but smaller fish left over after the canoe crew has eaten raw as much as they wish while in the canoe, must be given to the *pakupaku* in return for her food. Membership in the crew of a trolling canoe is no light honor. The two days' circuit round the atoll is a task for brawny paddlers only, especially if the trolling is without much success; and the crew earn well the after-contest rest.

2:Macgregor E-2 (1933) 1935 Pukapukans

000 The islands are surrounded by a continuous reef. Entrance to the land-locked lagoon is through a pass in the western reef wide enough for canoes but not for larger craft. All goods must be trans-shipped and carried ashore in small boats.

The climate of Pukapuka is said to be remarkably equable and the rainfall usually sufficient. During the winter, April to September, the days become exceedingly hot and breathless when the wind drops, and the vegetation often becomes dry and even scorched. It is a season of suddenly changing and heavy winds which descend with little warning, and may destroy all the coconut trees. In 1914 a great tidal wave washed over most of the atoll.

Each of the islets has seep holes or wells of brackish water which the natives can drink, and formerly water was caught from the frequent sea showers which pass over the island; but neither of these sources insured an unfailing supply. Today water caught from the roofs of the church and meeting house is stored in reservoirs.

The flora includes several useful plants. Fair-sized *puka* trees (*Hernandia ovigera*) grow on Motu Kotava, but elsewhere the trees are small. *Akanava* (*Cordia subcordata*), a hard wood very resistant to water, grows on each islet. Canoes are made chiefly from sections of the trunks of these trees. *Puapua* (*Guetarda speciosa*) and *wetau* (*Calophyllum inophyllum*) are plentiful and are used in canoes when *akanava* is not available. *Puka* is used for outriggers and for easily worked implements and utensils. Coconut trees are plentiful. *Wau* (hau; *Hibiscus tiliaceus*) supplies a bast which is made into very strong fish line and cordage for fish nets. The wood is used in house construction and for fire plows. *Wetau* wood is used in making containers. *Ngangie* (*Pemphis acidula*), a bush which supplies strong, branched pieces of wood, grows on the atoll and is made into *Ruvettus* hooks. The *tsiale* (*Gardenia tahitiensis*) is a tree with deliciously fragrant flowers which are woven into head wreaths and used for decorating the body. At least two varieties of hala (*Pandanus*) grow on the atoll. The most common variety (*'ala*) is used in mat-making, and its fruit is an important food. The second variety (*kie*) is made into finer and softer mats and, formerly, into the men's garment (*maro*). Bryan (1) reports that no bread-fruit trees grow on the island.

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● 262 The vegetable staples in the native diet are coconut and taro. Coconuts are abundant; in profitable seasons as much as 100 tons
439 of copra are exported.

2:Macgregor E-2 (1933) 1935 Pukapukans

of copra are exported. Nine varieties of taro (*Colocasia esculenta*) grow on the island; *talo Borabora, talo maoraora, talo koli, talo uakene, talo nenengu, talo kula, talo pongi, talo taraki, talo 'enga'enga. Puraka* (*Cyrtosperma chamissonis*), a coarse tuber of the taro family with enormous heart-shaped leaves, is grown in the wet pits. This plant is said to have been introduced from the Cook Islands. Bananas (*wuti*), papayas, limes, and sugar cane grow on the island, but because of the poor soil the production is slight and contributes very little to the food supply. Hutchin (6, p. 173) states that sweet potatoes (*kumala*) and arrowroot were formerly grown.

Fish forms the chief flesh diet. Turtles are caught during the mating season when they are off the reefs and the females come ashore to lay their eggs in the sand. Pigs and chickens are kept on the island but are eaten only on occasions of celebrating some event.

Although Pukapuka was sighted by a European ship as early as 1765, it has enjoyed an existence remarkably free from intercourse with Europeans because of its isolation and its lack of natural resources. Captain Byron discovered the island on June 21, 1765, and named it "Danger Island" because of its treacherous submerged reefs and rapid currents. Lovett (8, p. 372) states that a native missionary teacher was on the island in 1857 and had proselytized most of the natives before the arrival of Reverend W. W. Gill, the first European missionary, in 1862. During the decade 1860-79 Peruvian slavers raided the island for laborers to carry to South America. In two visits they took 150 men and women, none of whom ever returned to their home (11).

The island was formally annexed by Great Britain in 1892. In 1901, by an Imperial Order in Council, Great Britain extended the boundaries of New Zealand to include the Cook Islands, Tongareva, Manihiki, Rakahanga, Palmerston, Pukapuka, and Niue. Pukapuka is now governed by the Cook Islands Administration. At present Mr. Geoffrey Henry, Resident Agent, directs the government, and with Mrs. Henry conducts the island school and cares for the health and sanitation. Most of the population belongs to the London Missionary Society Protestant church, which is under the direction of a native pastor. In 1919 Mr. Wicks, of the Seventh Day Adventist sect, arrived at the island and directed the building of a church during his temporary residence. A small group still retain their membership in this church. No European missionaries live on the island today.

FIELD NOTES: MISCELLANEOUS

527 Christmas activities.

535 Christmas day itself was not marked by any particular activity save the women's tutaka and dancing. Post-Christmas activities have been the men's cricket matches.

Women's tutaka: The men of each village stay at home, and the women of each village, married, unmarried, young and old, including also an assortment of children, visit each village in turn not their own and dance for the men. They then eat and afterwards dance some more. The women of Yato thus visit Loto and Ngake, the women of Loto visit Yato and Ngake and the women of Ngake visit Loto and Yato.

526 Preparations: For about three weeks before Christmas day,
535 the women have been practising cricket in the afternoons and practising upaupa in the early evenings, later when the full moon came up, practising upaupa in the evening by moonlight. Men beat the gong and empty kerosene tins to mark the rhythm, and usually a crowd of men stand by to watch, pass witticisms or criticisms. The inevitable children play about among dancers or bystanders.

535 Dancing: Women's dancing is vaiau. The women stand in two rows, one woman behind the other, facing a leader who calls out directions for the dance and who also dances. (note that the women are in two single files) The dance movements are simple and there is little variety in the movements. They consist of brief waving hand motions, shuffling of the feet from side to side, or forwards and backwards, turning motions with a short jump, placing one foot forward and then drawing it back, and along with almost all these motions, wobbling of the backside and stomach from side to side, or else thrusting the backside forward and then drawing it back. Backside and stomach motions may be slow or quick according to the rhythm of the particular dance.

527 Tutaka: The men are looked upon as the hosts for the day.
574 The women prepare the talo for the feast, but a meeting of
[262] the men is held some days before Christmas to decide upon the other foods to be offered to the visiting women. In the case of Yato, the men decided to present fruits from Kotawa, nuts and deep sea fish. Christmas was on Tuesday. On the preceding Thursday, 30 lopas were commissioned to visit Kotawa, and bring back from there 60 nuts per man, also the necessary fruits, papaya and limes. Monday was set aside for fishing outside the reef, but the weather was too bad to venture outside the reef, so at low tide on Monday night, all the men went fishing inside the lagoon. The resulting fish was of poor quality, but it was the best procurable. Early on

527 activities took place in the churchyard or near-by. Members
794 of the Seventh Day Adventists and Roman Catholic sects have
798 not been present officially at any of the games, though many of the former have attended, including their pastor, for the wrestling. The absence of the Roman Catholics severely weakened some of the teams, but the pastors of both the London Missionary Society and the Roman Catholic Church will have nothing to do with each other.

527 The long period of sports meant a certain shortage of food.
262 The men went fishing early in the morning whenever it was possible, but there was in general little fish or talo in the villages and the most that people had was nuts. Each day the spectators of the sports, and this includes almost everyone on the island, all being out to enjoy the sports, and the company of their fellows, took with them a bundle of nuts and these eaten during the day together with more nuts, or a little fish at night, constituted the sole food of most for a week. The two Saturdays gave the woman a chance to prepare talo and the men to do extended fishing.

159 Dreams.

Veti: old man 60 years old, deacon of the church, etc. Had been talking to men of the village in a village discussion. Went home to sleep. Dreamt that he saw five Chinese. All Pukapukan people were gathered together in the church for the anointing of new members. Missionary and the deacons entered. But they could not start, they had to wait for Talainga and himself and the five Chinese. Though he had seen Chinese in Pukapuka off ships that called, he wouldn't have known that these were Chinese had he not been told by the people. Finally, after a delay, Veti led the five into the church. The deacons would not speak to him, excepting only Talainga, who asked why he had kept the five out so long. The Chinese started to talk Chinese, which Veti understood. The Chinese swore at Talainga, and told Veti to swear at him too, in Chinese, but he couldn't do this. Then they swore at the deacons, and Veti entreated them to stop. Frightened he led them out of the church; the congregation came out and the dream ended.

(Both Talainga and Veti had been working very assiduously at the sessions on ethnology; in addition, Veti was dictating old mako to Talainga to record.)

Lita, MitiMoa's wife: Dreamed that she walked along to the beach where she saw her grandson. She joined him and together they went out to the reef to fish. The little boy disappeared, having fallen through a hole. She cried out for him but could not find him. Then, suddenly the hole in the reef changed into